



Frequently Asked Questions

1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE, 1,4-DICHLOROBENZENE (DCBs)

What are 1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE and 1,4-DICHLOROBENZENE (DCBs)?

1,2-dichlorobenzene, 1,3-dichlorobenzene and 1,4-dichlorobenzene are three forms of dichlorobenzene, a man-made chemical. They are also called DCBs.

1,2-dichlorobenzene is a liquid that ranges from colorless to pale yellow. 1,3-dichlorobenzene is a colorless liquid. 1,4-dichlorobenzene is the most commonly used DCB. 1,4-dichlorobenzene is a white or colorless solid with a strong, sharp odor like mothballs. When exposed to air, it changes to a vapor.

Where are DCBs found and how are they used?

1,2-dichlorobenzene is used to make herbicides, products that control unwanted plants. It can sometimes be detected in air. 1,3-dichlorobenzene is also used to make insecticides, medicine and dyes.

1,4-dichlorobenzene is used to make moth balls and solid deodorant blocks for garbage cans and restrooms. It is also used to control odors in places where animals are held. It has been used as an insecticide on fruit, and to control mold and mildew on tobacco seeds, leather and some fabrics. Industries that make 1,4-dichlorobenzene release small amounts to air, soil and water. This chemical can also be detected in indoor air where products containing 1,4-dichlorobenzene are used.

How can people be exposed to DCBs?

You could be exposed to DCBs through:

Breathing DCBs in air, if you work where they are made or used. You can also breathe DCBs if you live near a plant or waste site with high DCB levels. You may have a higher exposure to 1,4-dichlorobenzene if you work or live where solid air fresheners, toilet block deodorants or moth balls are used.

Drinking water contaminated with DCBs.

Touching products that contain 1,4-dichlorobenzene. These include air fresheners, mothballs or toilet deodorizer blocks. You can also touch DCBs if you work where they are used or made.

Eye Contact by touching eyes with hands that contacted DCBs. You can also get DCB vapors in your eyes.

Eating DCBs in foods containing them. Such foods can include meat, chicken, eggs or fish.

How do DCBs work and how can they affect my health?

Breathing high levels of 1,2-dichlorobenzene and 1,4-dichlorobenzene irritates the eyes and nose and causes burning and tearing of the eyes. DCBs exposure also causes coughing, trouble breathing and nausea.

Exposure to 1,4-dichlorobenzene can cause the eyes, hands and feet to swell. Touching 1,4-dichlorobenzene can cause a burning feeling.

Exposure to high levels of 1,2-dichlorobenzene and 1,4-dichlorobenzene can cause headaches or dizziness. Repeated exposure to 1,2-dichlorobenzene or 1,4-dichlorobenzene can harm the nervous system, blood cells, lungs, liver and kidneys.

Very little is known about the health effects of 1,3-dichlorobenzene. They are likely to be similar to those of 1,2-dichlorobenzene and 1,4-dichlorobenzene.

24/7 Emergency Contact Number: 1-888-295-5156

Revised: 03/2007

Page 1 of 2



How is DCB poisoning treated?

There is no treatment just for DCBs. Doctors can treat the symptoms.

What should I do if exposed to DCBs?

If you breathe DCBs, move to an area with fresh air. Get medical help right away. If needed, rescue breathing and CPR should be performed.

If you get DCBs in your eyes, flush eyes right away with large amounts of water. Flush for at least 15 minutes. Lift the upper and lower lids from time to time. Get medical help right away.

If you touch DCBs, quickly remove contaminated clothing. Wash skin right away with large amounts of soap and water.

If you eat or drink DCBs, get medical help quickly.

What factors limit use or exposure to DCBs?

For most people, exposure to DCBs occurs in the home, usually from using mothballs and solid deodorizers containing 1,4-dichlorobenzene. Reduce exposure by using products that do not contain this chemical.

Is there a medical test to show if I've been exposed to DCBs?

A urine test can test for exposure within the previous day or two. A blood test may also be used.

Technical information for DCBs

CAS Numbers: 1,2-dichlorobenzene - 95-50-1; 1,3-dichlorobenzene - 541-73-1; 1,4-dichlorobenzene - 106-46-7

Chemical Formulas: 1,2-dichlorobenzene - $C_6H_4Cl_2$

1,3-dichlorobenzene - $C_6H_4Cl_2$

1,4-dichlorobenzene - $C_6H_4Cl_2$

Carcinogenicity (EPA): 1,2-dichlorobenzene and 1,3-dichlorobenzene are not classifiable as to human carcinogenicity. The carcinogenicity of 1,4-dichlorobenzene is being reassessed.

MCL (Drinking Water): The MCL for 1,2-dichlorobenzene is 0.6 mg/L. There is no MCL for 1,3-dichlorobenzene. The MCL for 1,4-dichlorobenzene is 0.075 mg/L.

OSHA Standards: There is no OSHA PEL for 1,2-dichlorobenzene. The OSHA short term exposure limit is 50 ppm (300 mg/m³). There are no OSHA standards for 1,3-dichlorobenzene. The OSHA PEL standard for 1,4-dichlorobenzene is 75 ppm (450 mg/m³).

NIOSH Standards: There is no NIOSH TWA for 1,2-dichlorobenzene. The NIOSH short term exposure limit is 50 ppm (300 mg/m³). There are no NIOSH standards for 1,3-dichlorobenzene. The NIOSH standard for 1,4-dichlorobenzene in the work place is the lowest feasible concentration.

References and Sources

Agency for Toxic Substances and Disease Registry (ATSDR). 2004. *Toxicological profile for dichlorobenzenes. (Draft for Public Comment)*. Atlanta, GA: U.S. Department of Health and Human Services.

American Conference of Governmental Industrial Hygienists (ACGIH). 2003. *Guide to Occupational Exposure Values*. Cincinnati, OH.

NIOSH Pocket Guide to Chemical Hazards. 2003. Atlanta, GA: U.S. Department of Health and Human Services, <http://www.cdc.gov/niosh/npg/npgd0190.html>

<http://www.state.nj.us/health/eoh/rtkweb/0643.pdf>

24/7 Emergency Contact Number: 1-888-295-5156

Revised: 03/2007

Page 2 of 2

Doc. # 35-05-20/07/03/97